Table 1. pH of the corrosion media

DMEM pH	Supernatant pH	KH_2PO_4 pH
7.70±0.01	6.96±0.02	4.34±0.02

Table 2. Rapid and progressive calcium and phosphate deposition on magnesium corrosion layer surfaces

Corrosion time and treatment *	Mg [%]	O [%]	Ca [%]	PO_4 [%]
-	71±0.6	25.8±0.3	-	-
1h	56.0±2.6	31.3±0.3	3.5±1	3±1.2
6h	46.9±1.6	35.5±2.1	5.5±1.4	4.8±0.9
1d	28.6±4.9	48.0±2.2	8.0±1.5	6.6±0.9
7d	19.3±2.2	52.3±0.2	10.9±1.1	10.8±0.8
7d P	44.3±0.7	40.9±3.2	3.3±0.8	3.8±0.2
7d S	50.4±5.6	38.1±1.5	3.7±0.8	4.3±0.7

*Abbreviations are described in the legend of Figure 7.

Table 3. Key features of selected model systems for the investigation of metallic magnesium-containing implants

Model system	Salient features	Observations and conclusions	References
Standard in vitro models	Controllable and precise technical corrosion assays mostly in the absence of organic molecules.	Sample corrosion rate dependence on corrosion media characteristics such as pH or the chlorine content. In vivo material properties could not reliably be predicted.	[2,3,7-9]
Acellular ex vivo model	Chemical and physical effects of magnesium implants in hard tissue in the absence of cells.	Force generation solely by accumulating corrosion products indicating a mechanism for bone growth stimulation in vivo.	This study
Standard cell cultures	Interactions of magnesium alloys and corrosion products with cultured cells in two dimensions in the absence of force.	Stimulatory to cytotoxic effects, depending on experimental parameters. Poorly defined role of media components and of metabolic products. In vivo material properties could not reliably be predicted.	Reviewed in [1,6,7]
Animal models and clinical studies	Complex, implant location and time-dependent interactions with tissue and immune cells.	Combined contributions of corrosion and bone growth to implant fixation in hard tissue. Good biocompatibility with side effects, such as rapid implant degradation, gas cavities or bacterial colonization in soft tissue.	[1,2,4,5]